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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/815,791	04/02/2004	Cristian M. Neculescu	02734-0388-03	9925

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EXAMINER	
WOLLSCHLAGER, JEFFREY MICHAEL	
ART UNIT	PAPER NUMBER
1791	
MAIL DATE	DELIVERY MODE
09/25/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/815,791	NECULESCU ET AL.	
	Examiner	Art Unit	
	JEFFREY WOLLSCHLAGER	1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 May 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *100-108 and 110-118* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *100-108 and 110-118* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

Applicant's amendment to the claims filed May 26, 2009 has been entered. Claims 108 and 110 are currently amended. Claims 1-99 have been canceled. Claims 100-108 and 110-118 are pending and under examination. Applicant's amendment to the claims has overcome the 35 USC 112, second paragraph rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 102-108, 110 and 113-118 are rejected under 35 U.S.C. 103(a) as being unpatentable over Huang (US 5,439,628) in view of Mitsuno et al. (EP 0 243 206) and either of Fujii et al. (US 5,473,016) or Nicoll (US 4,311,658), and in view of Emura et al. (US 4,436,685).

Regarding claims 108 and 110, Huang teaches the basic claimed process comprising thermoforming (col. 8, lines 1-5) a filled polypropylene sheet to produce a container wherein the

container has a rough/coarse surface because of the filler particles effusing from the surface (col. 7, line 35- col. 8, line 5 and col. 6, lines 25-30). The filled sheet is extruded and calendared prior to the additional processing step of forming the articles, such as forming containers by thermoforming (col. 8, lines 53-62). Huang discloses mica as a suitable filler in a relatively short list of fillers, but only exemplifies talc or calcium carbonate (col. 6, lines 24-45).

However, Mitsuno et al. disclose a polypropylene (page 3, lines 7-10) filled composition which provides improved properties (page 2, lines 48-51) wherein talc and/or mica alone or together are the employed fillers (page 3, lines 54-61) and the composition is used in various molding applications (col. 4, lines 52-55). Further, Mitsuno et al. appear to show their best physical property results, such as heat deformation temperature and adhesive strength, when employing mica and talc together (examples 19-22; Table 5).

Additionally, Huang does not disclose the thermoforming temperature. However, Emura et al. disclose a process of thermoforming a polypropylene sheet wherein the temperature of the sheet is controlled between about 130 °C (266 °F) to 150 °C (302 °F) (col. 4, lines 10-16).

Further, while Huang discloses a cooling roll configuration that involves a takeoff roll, embossing roll and cooling roll (Table 2; col. 9, lines 30-32) to provide a desired texture, Huang does not expressly state this is a matte surface. However, Fujii et al. disclose that embossing rolls are understood to form a matte surface in the analogous sheet forming art (Abstract; col. 11, lines 8-23). Alternatively, Nicoll teach a method of forming a matte surface on sheets with matte rolls (Abstract; col. 1, lines 47-56; col. 3, lines 51-67).

Therefore it would have been *prima facie* obvious to one having ordinary skill in the art at the time of the claimed invention to have employed mica as a filler in the method disclosed by Huang, as suggested by Mitsuno, for the purpose of producing a desired product with improved physical properties. It is further noted that Mitsuno et al., in addition to Huang, suggest that

mica and talc are equivalent fillers suitable for the same purpose. Further, it would have been *prima facie* obvious to one having ordinary skill in the art at the time of the claimed invention to have modified the method of Huang and to have employed the thermoforming conditions set forth by Emura et al. since Emura et al. suggest such conditions provide the appropriate balance between stiffness for easy transport and softness for thermoforming (col. 3, lines 56-67). Additionally, it would have been *prima facie* obvious to one having ordinary skill in the art to have employed a matte roll in the method of Huang since Fujii et al. provide evidence that the embossing roll of Huang is reasonably understood to be a matte roll, or alternatively, it would have been obvious to form a matte surface in the method of Huang for the purpose with a matte roll, as suggested by Nicoll, for the purpose, as suggested by Nicoll, of forming a surface that improves the ink receptivity of the plastic.

Finally, the examiner notes that the combination does not expressly teach the container has all the same claimed physical properties and effects. However, the combination teaches all claimed process steps, and employs all the claimed materials in the same claimed manner. As such, the claimed physical properties and effects are necessarily realized.

As to claims 102-107 and 113-118, Huang employs pre-blended/admixed titanium dioxide (Example 1) and polyvinylidene fluoride processing aids (col. 7, lines 1-22). Additionally, Huang teach silanes are suitable for high level of filler loading to improve dispersion and compatibility (col. 6, lines 43-45).

Claims 100, 101, 111 and 112 are rejected under 35 U.S.C. 103(a) as being unpatentable over Huang (US 5,439,628) in view of Mitsuno et al. (EP 0 243 206) and either of Fujii et al. (US 5,473,016) or Nicoll (US 4,311,658), and in view of Emura et al. (US 4,436,685),

as applied to claims 102-108 and 110 and 113-118 above, and further in view of Throne (Thermoforming) and/or Watkins et al. (US 5,514,315).

As to claims 100, 101, 111 and 112, Huang discloses thermoforming (col. 8, lines 1-5) in general. Huang does not disclose the specific thermoforming techniques claimed. However, Thermoforming by James L. Throne discloses a variety of thermoforming techniques are known and suggests their equivalence (pages 21-29). Further, Watkins et al. teach a method that employs vacuum to thermoform a polypropylene sheet (col. 3, lines 39-50).

Therefore it would have been *prima facie* obvious to one having ordinary skill in the art at the time of the claimed invention to have modified the method of Huang and to have employed the specific thermoforming techniques suggested by Throne since Throne suggests the techniques are equivalent alternative thermoforming techniques known in the art (MPEP 2144.06-2144.07). Additionally or alternatively, it would have been *prima facie* obvious to one having ordinary skill in the art at the time of the claimed invention to have modified the method of Huang and to have employed the specific vacuum forming technique disclosed by Watkins since Watkins suggests such a thermoforming technique protects the integrity of the thermoformed sheet (col. 3, lines 39-50).

Response to Arguments

Applicant's arguments filed May 26, 2009 have been fully considered, but they are not persuasive. Applicant argues Huang discloses at col. 7, lines 47-54 that both sides of the sheet produced by Huang are rough and coarse and therefore Huang makes no mention of one surface having a micronodular surface and one surface having a non-micronodular surface. This argument is not persuasive. The examiner submits that this disclosure in Huang is not related to the thermoforming step. As such, this disclosure in Huang et al. is directed to the

extruded polypropylene containing filler such as mica and not the condition of the material after thermoforming. Further, the examiner notes that the material at this stage in Huang et al. is the same as applicant's extruded material since it is polypropylene with filler that can be mica. The examiner notes that the instant disclosure teaches that the one surface becomes more exposed and has an increased roughness relative to the other as a result of the thermoforming step. The instant disclosure is not that the one surface that has a non-micronodular surface is completely smooth without any surface roughness. The examiner submits that it appears quite clearly in the instant disclosure that the micronodular surface is formed due to thermoforming the extruded polypropylene/mica sheet (paragraphs [0004; 0035; 0060; 0108-0113] of the instant disclosure published as US 2004/0185200). The combination teaches and suggests thermoforming an extruded polypropylene/mica sheet. As such, the combination teaches and suggests employing the same claimed materials in the same claimed process. It follows therefore that the same claimed effects and physical properties would be achieved by the practice of the combined method. The examiner further submits that the broad disclosure of suitable thermoforming methods (e.g. claims 100 and 111) further supports the examiner's position that it is the thermoforming of the recited composition (i.e. the use of mica as the filler in polyolefin) that is primarily responsible for achieving the claimed results.

Applicant argues that none of the secondary references remedy the deficiencies of Huang et al. This argument is not persuasive. As an initial matter, the examiner submits that Huang et al. is not deficient as argued. Further, the examiner notes that Huang et al. disclose employment of an embossing roll (Table 2) and Nicoll teaches that one side of a sheet can be embossed/matted to facilitate printing on that side.

The examiner submits that the claims as they are currently presented are properly rejected by the combination and that the claims would need to be amended to distinguish over the prior art absent a persuasive showing of evidence.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JEFFREY WOLLSCHLAGER whose telephone number is (571)272-8937. The examiner can normally be reached on Monday - Thursday 6:45 - 4:15, alternating Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson can be reached on 571-272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jeff Wollschlager/
Examiner, Art Unit 1791

September 24, 2009